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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/508,869 | 09/23/2004 | Akifumi Nishio | 121235 | 8521 |

7590 11/17/2005
Oliff & Berridge
P O Box 19928
Alexandria, VA 22320

EXAMINER

NGUYEN, GEORGE BINH MINH

ART UNIT PAPER NUMBER

3723

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | | |
|------------------------------|------------------------|------|---------------------|--|--|
| Office Action Summary | Application No. | | Applicant(s) | | |
| | 10/508,869 | | NISHIO ET AL. | | |
| | Examiner | | Art Unit | | |
| George Nguyen | | 3723 | | | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 23 September 2004.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-16 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 23 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/23/04.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of Applicant's preliminary amendment filed on September 09, 2004

Claims 8-16 were added; Thus, claims 1-16 are presented for examination.

Receipt is acknowledged of the IDSs' filed on September 23, 2004 which have been considered and placed of record in the file.

This application has been filed with formal drawings which are acceptable to the examiner.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-8, and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deming'5,487,694 in view of Bresciani'4,633,848.

With reference to Figure 1-2, col. 2-4, Deming discloses the claimed invention including:

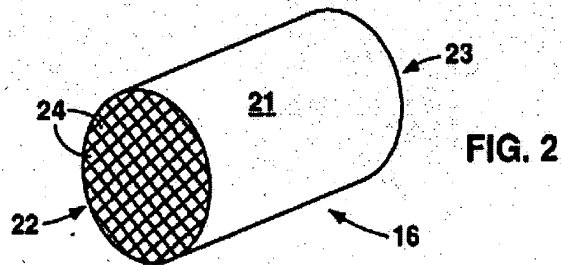
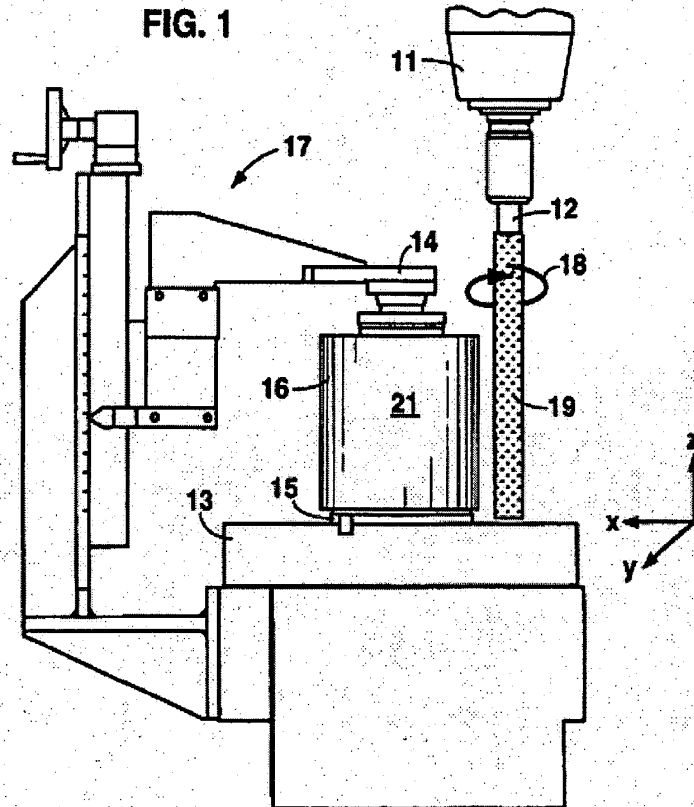
- Providing a crude honeycomb structure 16 secured to support means 13, capable of rotation.

- Rotating abrasive means is attached to spindle means 11 for allowing and controlling the movement of rotating abrasive means 12 relative to substrate body 16.
- In col. 4, lines 49-55, it is disclosed that the best way of contouring would be through an appropriate combination of part rotation and spindle movement relative to the part. This combination could be controlled and accomplished through the use of a computer with different software developed for different piece of shapes or patterns.
- In col. 6, lines 9-14, Deming further discloses that while the rotating-abrasive means is of the diamond type cutting saw, it should be apparent that other well-known abrasive means could be substituted.

U.S. Patent

Jan. 30, 1996

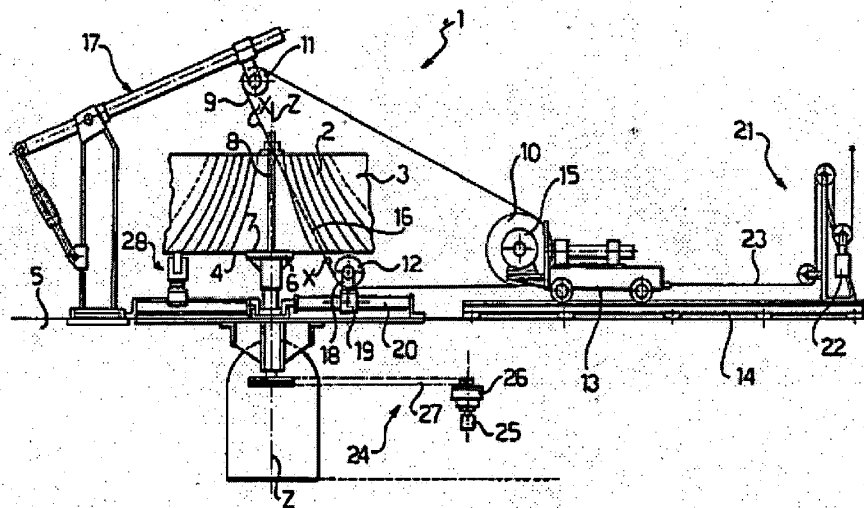
5,487,694



However, Deming does not specifically disclose a cutter having linear cut-off device.

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With reference to Figure 1, col. 4, lines 10-20, Bresciani discloses a method of cutting through a marble block set into rotation about one axis using a saw wire stretched through said block in spaced apart relationship with said axis. In col. 4, lines 10-20, the advantage of the inventive method is to eliminate the cracking of the marble and the making in a quick and reliable manner of annular bodies which may have a small thickness dimension.



A main advantage of the inventive method resides in that it provides for the making in a quick and reliable manner of annular bodies which may have a small thickness dimension.

- 15 By virtue of the block being rotated at a relatively low rpm, cracking of the marble is virtually eliminated. Furthermore, each cut executed through the marble provides in one operation both the outer surface of one annular body and inner surface of an adjacent annular
20 body.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of cutting a workpiece in Deming with a wire saw as taught by Bresciani, since Bresciani states at col. 4, lines 10-20 that such modification would eliminate the cracking of the workpiece and

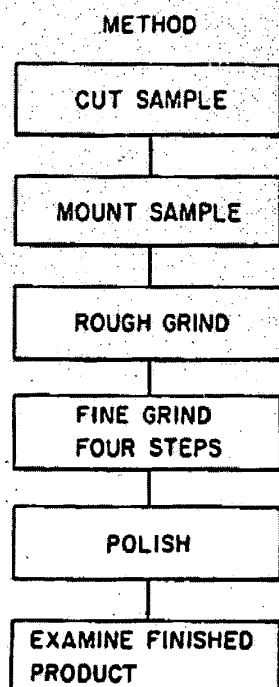
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provide the making in a quick and reliable manner of annular bodies which may have a small thickness dimension.

4. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deming'694 and Brisciani'848 as applied to claim 1 above, and further in view of Goodwin'H244.

Deming modified by Brisciani has been discussed above, but does not disclose a step of fine grinding after the rough grinding set forth in the claim.

With reference to Figure 1, Goodwin teaches that it is known to have utilized the fine grinding step after the rough grinding step to obtain the best possible surface that is relatively free of disturbed areas (col. 2, lines 20-25).



Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of making a honeycomb structured in Deming/Bresicani with a find grinding step as taught by Goodwin, since Goodwin states in col. 2, lines 20-25, that such modification would obtain the best possible surface that is relatively free of disturbed areas (col. 2, lines 20-25).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Eichelberger'6,776,689 and Horikawa et al.'5,145,539 all disclose method of producing a honeycomb structural body.

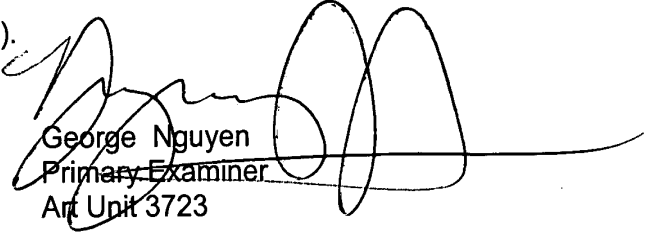
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Nguyen whose telephone number is 571-272-4491. The examiner can normally be reached on Monday-Friday/630AM-300PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GEORGE NGUYEN
PRIMARY EXAMINER



George Nguyen
Primary Examiner
Art Unit 3723

GN – November 15, 2005